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Tactical Nuclear Weapons in Europe: Strategy and Future Trends

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The purpose of the study was to determine the future principles of employment of tactical nuclear weapons (TNW) in the NATO Central Region and the manner in which they should be integrated into the overall force structure.

This study concentrates on the command and control and stockpiling aspects of this very difficult and politically sensitive problem. The four models offered are: (1) mixed stockpile of U.S. and non-U.S. tactical nuclear weapons; (2) stockpile solely in the custody of U.S. forces positioned in the Central Region (current situation); (3) non-U.S. tactical nuclear weapon stockpile on the Central Region; and (4) U.S. only TNW stockpile positioned outside the Central Region. Although conceding that alternative number 2 is the only realistic solution for the present situation, this study concludes that alternative number one will become increasingly attractive in the future, particularly with the continued trend toward the political unification of Western Europe.

TACTICAL NUCLEAR WEAPONS IN EUROPE
STRATEGY AND FUTURE TRENDS

A RESEARCH PAPER SUBMITTED TO
THE DEPARTMENT OF STRATEGY
IN FULFILLMENT OF THE COURSE REQUIREMENTS
OF THE NATO STUDY EFFORT

BY

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MAJOR PETER J. VON GEYSO

MAY 1975

I. STATEMENT OF PROBLEM

To determine:

- The future principles of employment of tactical nuclear weapons (TNW) in the Central Region in order to make use of them more appropriate to the political goals of the United States and a unified Europe and make flexible response more efficient and credible.
- the manner in which they should be integrated into the overall force structure.

II. ASSUMPTIONS

A. Tactical nuclear weapons are currently one component of the concept of realistic deterrence.

B. NATO will maintain the concept of forward defense.

C. The strategic nuclear stalemate between the superpowers will continue.

D. Today, NATO conventional forces are not sufficient to contain an all-out conventional attack by the Warsaw Pact in the Central Region.

E. A U.S. military presence will continue in Western Europe. Its size and composition may change in the near future.

F. There is a continuous trend toward the political unification of Western Europe.

III. DEFINITIONS

A. Tactical Nuclear Weapon (TNW) - a nuclear weapon whose employment is limited to the Combat Zone.

B. Quick Reaction Alert (QRA) - an alert posture assumed by selected missile firing units (Pershing) and interdiction aircraft with "unloaded" weapons, programed for predetermined targets in a counter-surprise strike. Their range capability exceeds that of the combat zone.

C. Field Storage Location (FSL) - NATO term describing a nuclear weapon storage location other than a permanently constructed, peacetime special ammunition storage (SAS) site. It normally is used in connection with deployment of nuclear weapons just prior to the outbreak of hostilities, or thereafter.

D. NATO Triad - components of flexible response, i.e. conventional forces, TNW, and strategic weapons.

IV. DISCUSSION

A. Facts and constraints:

1. Political -

a. With strategic parity and the Warsaw Pact's conventional strength advantage over NATO, TNW are assuming an increasingly significant role within the Triad of Flexible Response.

b. The Nuclear Non-Proliferation Treaty limits weapons ownership to the United States and the United Kingdom within NATO. Also, West Germany has renounced nuclear weapons, yet wants to retain influence in the employment of these weapons in NATO.

c. Before unification of Western Europe occurs, a European TNW capability is unlikely to be created due to current political conditions.

d. At the present time, it is in the interest of Western Europe that a U.S. conventional and TNW presence is maintained, and the U.S. provide a strategic nuclear umbrella.

e. There are several national European views that have to be considered in TNW employment, e.g. ADMs, high yields, etc.

f. It is in the interest of the U.S. to avoid the "trip wire" effect, i.e. the automatic escalation from conventional to TNW or strategic weapons.

g. The cost of stockpile modernization will be considerable.

2. Military/Strategic -

a. TNW capacity is still primarily a U.S. near-monopoly in Western Europe. The existing capacity of France and the United Kingdom is of minor significance. Yet, it is a force we may count on.

b. Part of our present TNW stockpile can be perceived by the Warsaw Pact as being a first strike, strategic threat. It could encourage a preemptive strategy on their part.

c. Current command-and-control and release procedures are cumbersome and therefore have a negative influence on the credibility of our deterrence.

3. Tactical -

a. There is a significant shortfall in the compatibility of our current TNW stockpile mix and its employment doctrine.

b. There has been a trend in the last three years to reduce the number of TNW storage locations and consolidate them at fewer sites.

c. The psychological environment in Western Society puts NATO at a disadvantage in nuclear warfare.

d. Training for the nuclear battlefield is deficient in the Alliance. There are indicators that the Warsaw Pact has an edge on the West in this regard.

4. Technical -

dirty weapons create obstacles

a. The size of our current TNW stockpile is possibly excessive. It is composed of "dirty" weapons systems whose technology represents the state-of-the-art of the 1950's and early 1960's with few exceptions.

b. A quantum jump in weapons technology will be available in the near future. Tailored effects, exotic kill mechanisms, precision guidance and fusing, more dependable and sophisticated PAL equipment and weapon destruction and denial devices are some of the weapons improvements on the horizon.

B. PRINCIPLES

1. Flexibility -

a. Policy for the use of TNW in Europe, regardless of who owns the weapons, will require mutual agreement of all parties, to include the U.S.

b. Policy for the use of TNW should be flexible, providing for both a "coupled" and an "un-coupled" response of U.S. and/or Western European TNW, i.e. a response involving eventual escalation to use of strategic weapons or one in which such eventual use is precluded.

c. Within the TNW element of the Triad, there must be an ability to tailor the intensity of use, i.e. quantity, ranges and yields of the weapons used.

d. The First Use option regarding TNW should be retained.

c. Flexibility in targeting has to be greatly enhanced by modernizing the TNW stockpile, incorporating such features as precision delivery and low collateral damage effects.

2. Effectiveness and Simplicity of Control -

a. In the event of conventional hostilities, a friendly TNW capability-in-being is a strong deterrent to the use of nuclear weapons by the Warsaw Pact.

b. War strategy should attempt to achieve minimum collateral damage, especially since the initial targets will be on or near friendly soil.

c. Weapons technology and employment doctrine must be compatible at any point in time.

d. To achieve optimum effectiveness, there must de developed more efficient release procedures and command-and-control techniques.

3. Security -

a. The size of the optimal TNW stockpile must be driven by the requirements of NATO's overall strategy and tactical doctrine, while providing for the necessary degree of security for the weapons.

b. To decrease the vulnerability of TNW, optimal dispersion and mobility must be provided.

C. ALTERNATIVES

In the following section, there are discussed four different models for the future development and use of tactical nuclear forces in the European theater. They are emphasizing the organizational aspect of the problem since under this view, the whole spectrum of political, strategic and technical issues can be covered.

1. Mixed stockpile of U.S. and non-U.S. tactical nuclear weapons:

a. Advantages - This option provides for an optimal flexibility with regard to the employment of TNW in Europe. They could be used closely integrated as well as separately, thus allowing for both a total commitment of the whole Alliance

Valid assumption?

to the European Theater, or limiting the escalation of a European war to the use of the European nuclear component. Assuming that France will rejoin the military part of NATO in the near future, it also allows for a unified control over these weapons systems, thereby increasing the credibility of deterrence.

b. Disadvantages - Between the U.S. and Western Europe in the development of doctrines for the employment and the procedures for the release of TNW, a close cooperation is required. Since these regulations have to provide for both possibilities, i.e. the combined as well as the separate employment of U.S. and Western European TNW, they will be complicated and difficult to develop.

2. A stockpile solely in the custody of U.S. Forces positioned in the Central Region (the current situation):

a. Advantages - This alternative is in keeping with the spirit and intent of the policy regarding nuclear weapon non-proliferation. European NATO members would continue to receive the benefit of not having to expend the huge sums of money and resources needed to maintain and continually modernize a TNW arsenal. To the American view, this alternative maintains the ultimate control of the TNW stockpile in U.S. hands.

b. Disadvantages - Objections of some political elements in the U.S. to continued large U.S. Forces in Europe may eventually impact on this element of that presence. Growing concern with the peacetime terrorist threat to storage sites in Europe may increase pressures to return the TNW stockpile to CONUS. This alternative also represents an aspect of "over-commitment" and burden-sharing imbalance to the disadvantage of the U.S. Unanimity on decision-making regarding the use of these weapons is more difficult to achieve under this alternative.

3. A non-U.S. tactical nuclear weapon stockpile provided in the

Central Region:

a. Advantages - Both the U.S. as well as the Western European countries could pursue their own interests. The United States could avoid a "tripwire effect" and the Western Europeans would have more freedom of action in using TNW as complementary weapons to their conventional forces. This could provide for a "geographical firebreak" before escalating to the strategic level.

b. Disadvantages - Assuming that there is no automatic identity of U.S. and West European interests in the conduct of war in the European Theater, this option might have the effect that the U.S. "decouple" from the European nuclear weapon capability, resulting in the denial of the "strategic nuclear umbrella". Thus, this option weakens the credibility of the U.S. commitment to Europe and the deterrence of the whole Alliance.

4. A U.S.-only TNW stockpile positioned outside of the Central Region, i.e. as far back as CONUS or perhaps as far forward, if possible, as U.K.:

a. Advantages - Eliminates the possibility of early compromise, theft, and/or destruction of TNW by penetrating enemy ground forces and air forces while enhancing control and security over the systems prior to nuclear release. Reduces probability of preemptive strike by the Warsaw Pact to take out longer ranged TNW.

b. Disadvantages - Significantly reduces credibility that TNW will be used in the early stages of any conflict, thereby weakening TNW value as a deterrent. TNW introduction into the theater after initiation of hostilities would be politically and militarily extremely difficult.

V. CONCLUSIONS AND RECOMMENDATIONS

A. Alternative Nr. 2 has to be the only realistic one for today since the political conditions for a European TNW force do not presently exist. However, with the eventual realization of

politically feasible?

Assumption F (see para II), Alternative Nr. 1 appears most desirable from the NATO point of view, because:

1. It best satisfies the principle of flexibility (see para IV.B.1) which is given the highest priority by the study group.
2. It best takes into consideration the present situation within the Alliance as well as political trends in Western Europe.

It is recognized, however, that this alternative is feasible only if the European portion of the stockpile is developed in close cooperation with the United States, and after a political unification of Western Europe.

B. Finally, some key recommendations for the implementation of the principles mentioned above:

1. Renewed effort to improve the command and control systems and release procedures is absolutely essential in order to optimize the TNW element in the deterrence equation.
2. New TNW systems incorporating the latest technology should replace the current stockpile as soon as possible.
3. The number of TNW storage locations should not be further reduced. Any deficiencies in these sites regarding facilities and security should be improved to necessary standards as soon as possible.
4. The size of the TNW stockpile in Europe should be decreased and tailored to the policy of employment. This will also reduce or eliminate the current mobility shortfall.
5. NATO should unilaterally eliminate QRA weapons systems as destabilizing, since they can be perceived as a strategic threat to the Warsaw Pact.
6. Considering the probability of the future development of a European nuclear force, plans have to be prepared integrating these forces into the TNW stockpile within the European Theater as well as into a new doctrine for their employment.

Question feasibility of number of alternatives. Other aspects of employment. ? — problem statement broader than discussion.

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